

Ten Mile River Valley Groundwater Basin

- Groundwater Basin Number: 1-40
- County: Mendocino
- Surface Area: 1,490 acres (approx. 2 square miles)

Basin Boundaries and Hydrology

Ten Mile River Valley is an elongate, double-branched coastal drainage basin situated within the Coast Ranges of northwest central Mendocino County and located approximately 8 miles north of Fort Bragg. The north and south fork of Ten Mile River are approximately 5 and 6 miles in total length, respectively, and vary in width from about 0.2 to 0.4 miles. The Ten Mile River Valley Groundwater Basin is defined by the areal extent of Quaternary Alluvium, which is bounded on all sides by bedrock of the Franciscan Formation.

The North Fork of Ten Mile River Valley drains to the south and southwest before joining the South Fork approximately 1.5 miles from the Pacific Ocean. The South Fork drains to the northwest into the Pacific Ocean north of the town of Inglenook and Mac Kerricher State Park. Precipitation in this basin ranges from approximately 43 inches near the rivermouth to 49 inches on the eastern sides of the basin.

Hydrogeologic Information

Water-Bearing Formations

Significant water-bearing formations that occur in Ten Mile River Valley include only Quaternary Alluvium. Bedrock of the Franciscan Complex surrounds and underlies the area but due to its consolidated nature, it is essentially non-water bearing except for areas with significant fracture porosity. Information on water-bearing formations and groundwater occurrence was taken from DWR (1958).

Alluvium and River Channel Deposits. These deposits are Holocene in age and consist largely of unconsolidated silts, gravels, clays, and sands. These deposits are exposed in the active river channel and floodplain of Ten Mile River. Limited data suggests the alluvium in the smaller valleys in Mendocino County averages 10 to 15 feet thick. The maximum thickness of these deposits is unknown. No published well yield data was identified for wells in this area; however, wells drilled in the small alluvial valleys in Mendocino County have proven unproductive because of low permeability. Groundwater in the alluvial deposits is typically unconfined but may be semi-confined locally. No published specific yield data for alluvium in this area are available.

Groundwater Level Trends

No groundwater level data available.

Groundwater Storage

Groundwater Storage Capacity. No data available.

Groundwater in Storage. No data available.

Groundwater Budget (Type C)

No data available.

Groundwater Quality

Characterization. No groundwater quality data available.

Impairments. No data available; however, since this basin is in contact with the Pacific Ocean, seawater intrusion could reasonably be expected to be a problem.

Well Characteristics

Well yields (gal/min)		
Municipal/Irrigation	No data is available.	
Total depths (ft)		
Domestic	Range: 80 - 200	Average: 114 (Based on 15 well completion reports)
Municipal/Irrigation	No data is available	

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
DWR (incl. Cooperators)	Groundwater levels	None
DWR (incl. Cooperators)	Mineral, nutrient, & minor element.	None
Department of Health Services	Coliform, nitrates, mineral, organic chemicals, and radiological.	None

Basin Management

Groundwater management:	No groundwater management plans were identified.
Water agencies	
Public	Mendocino County Water Agency.
Private	

Selected Bibliography

California Department of Water Resources (DWR) 1958. Recommended Water Well Construction and Sealing Standards, Mendocino County. Bulletin No. 62 – November.

Errata

Changes made to the basin description will be noted here.